

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION**

**EON CORP. IP HOLDINGS, LLC**

*Plaintiff,*

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**v.**

**T-MOBILE USA, INC., et al,**

*Defendants.*

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**CIVIL ACTION NO.**

**6:10-cv-0379 LED-JDL**

**JURY TRIAL REQUESTED**

**v.**

**SKYGUARD, LLC, et al,**

*Defendants.*

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§

**CIVIL ACTION NO.**

**6:11-cv-0015 LED-JDL**

**JURY TRIAL REQUESTED**

**MEMORANDUM OPINION AND ORDER**

This claim construction opinion construes the disputed claim terms in U.S. Patent No. 5,592,491 (the “‘491 patent”) entitled “Wireless Modem” as asserted in the above captioned cases.<sup>1</sup> A *Markman* hearing was held on January 5, 2012 to construe the disputed terms of the ‘491 patent. For the reasons stated herein, the Court adopts the constructions set forth below.

**OVERVIEW OF THE PATENT**

The ‘491 patent is a continuation-in-part of U.S. Patent No. 5,388,101 (“the ‘101 patent”), which the Court previously construed in *Eon Corp. IP Holdings, LLC v. Sensus USA Inc.*, 741 F. Supp. 2d 783 (E.D. Tex. 2010). The ‘101 patent provides background for the subject matter of the

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<sup>1</sup>The remaining terms in the ‘015 action will be construed subsequent to a *Markman* hearing scheduled in September 2012. In the ‘015 action, Eon only asserted the ‘491 patent against Novatel Wireless, Inc. (“Novatel”). See ‘015 action, (Doc. No. 1). Novatel joined Defendants’ briefing in the ‘379 action. See ‘015 action, (Doc. No. 112).

‘491 patent and is expressly incorporated into the disclosure of the ‘491 patent. *See* ‘491 Patent at 1:17-19. The ‘101 patent discloses an “interactive two way data service network for conveying synchronously timed digital messages point to point through the network.” ‘101 Patent at 1:8-10. The network consists of “portable subscriber units of milliwatt transmitting power capacity,” *id.* at 3:35–36, base stations capable of transmitting data to the subscriber units, *id.* at 3:62–65, and “receive only stations” that relay communications from the subscriber units to the base stations. *Id.* at 3:65–4:2. Under certain conditions, however, a portable subscriber unit is unable to receive transmissions from the local base station:

For example, a user may purchase a subscriber unit and place the subscriber unit in an area which is not yet equipped with or is not covered by a local base station repeater cell. Additionally, a subscriber unit may be located within range of a local base station repeater cell, but may be positioned, for example, in a basement or other physical location which prevents the subscriber unit from receiving transmissions from the local base station repeater cell.

‘491 Patent at 1:44-52.

To overcome this problem, the ‘491 patent discloses “a modem which is used to enable communications between a subscriber unit and a local base station repeater cell when the subscriber units are unable to receive rf transmissions from the local base station repeater cell.” *Id.* at 2:22-27; *See also id.* at Fig. 2 (reproduced below). The specification explains that the object of the invention is to provide a method for communication that did not significantly increase the cost of communication:

It is therefore an object of the present invention to provide a system to enable communications between a subscriber unit and a local base station repeater cell in areas where such communication has previously been impaired, which does not require the addition of numerous costly local station repeater cells, which is not dependent on the physical location of the subscriber unit, and which does not significantly increase the cost of communication within the two way interactive broadcast data service network.

‘491 Patent at 2:14-22 (“Disclosure of the Invention”).

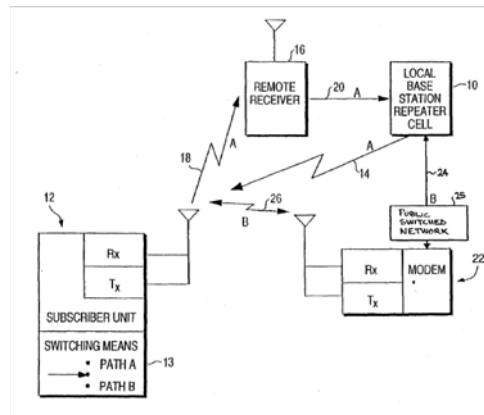


Figure 2 shows a subscriber unit 12 in communication with a local base station repeater cell 10 across two paths. When the subscriber unit is able to detect an rf signal from local base station repeater cell, the subscriber unit remains on “Path A,” the default position. *Id.* at 3:39-42. If, however, the subscriber unit is unable to receive rf signals from the local base station repeater cell, the switching means selects “Path B” and communication between the subscriber unit and local base station repeater cell occurs along Path B via the modem 22. *Id.* at 3:50-55. Thus, the ‘491 patent discloses a system and method for “two-way communication between local base station repeater cell 10 and subscriber unit 12 even if subscriber unit 12 is unable to receive rf signals from the local base station repeater cell.” *Id.* at 4:23-27.

Claim 1 is representative of the claims at issue:

A two-way communication network comprising:

a network hub switching center;

subscriber units dispersed at various locations within a predetermined geographic area, said subscriber units including switching means for selecting a communication path within said network,

local base station repeater cell communicating with identified individual subscriber units within a local base station geographic area associated with said local base station repeater cell, said local base station repeater cell further comprising,

base station data processing and communication unit for transmitting to a set of said subscriber units contained within said local base station geographic

area associated with said local base station repeater cell and receiving from a subset of said set of local subscriber units multiplexed synchronously related digital data messages of variable lengths for point-to-point communication between said local base station repeater cell and said subset of said local subscriber units,

reception for receiving and processing data messages from said set of local subscriber units comprising a local remote receiver disposed within one of a plurality of cell subdivision sites partitioned from said local base station geographic area associated with said local base station repeater cell, said plurality of cell subdivision sites dispersed over said local base station geographic area, said local remote receiver being adapted to receive low power digital messages transmitted from said local subscriber units within range of said local remote receiver,

said set of local subscriber units including low power mobile units located within said local base station geographic area, each of said local subscriber units adapted to communicate with said local base station repeater cell by way of digital data signals of variable lengths synchronously related to a base station broadcast signal and timed for multiplexed message transmission, and

a modem communicatively coupled to said local subscriber units and said local base station repeater cell for transferring said multiplexed synchronously related digital data messages of variable lengths between said set of local subscriber units and said local base station repeater cell if said local subscriber units are unable to directly communicate with said local base station repeater cell.

‘491 Patent at 6:16-64 (Claim 1).

### CLAIM CONSTRUCTION PRINCIPLES

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313-1314; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312-13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as

understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court's construction of claim terms. *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims, asserted and unasserted, can provide additional instruction because "terms are normally used consistently throughout the patent." *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficos N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning that it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. For example,

“[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’” *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent”). The well established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002). “Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover.” *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378-79 (Fed. Cir. 1988) (quotation omitted). “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Omega Eng’g, Inc.*, 334 F.3d at 1324.

Although, “less significant than the intrinsic record in determining the legally operative

meaning of claim language,” the Court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

## DISCUSSION

### I. Disputed Terms

The disputed terms and their corresponding constructions are set forth below.

#### a. “modem”<sup>2</sup>

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“a two-way communication device located proximate a subscriber unit, that receives, processes, and transfers data between external and local communication links”	Term has its plain and ordinary meaning, which is: “an acronym for modulator/demodulator”

The heart of the dispute between the parties is whether the patentee acted as his own lexicographer to define “modem” as something other than the plain and ordinary meaning of “modulator/demodulator.” Defendants argue that “one of ordinary skill in the art would understand the term ‘modem’ is a well known acronym for ‘modulator/demodulator.’” DEFENDANTS’

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<sup>2</sup>The term “modem” is found in Claims 1,5, 12, 13, and 17.

RESPONSIVE CLAIM CONSTRUCTION BRIEF (Doc. No. 562) (“RESPONSE”) at 7 (citing several dictionary definitions). Defendants argue that the specification discloses a modem that operates as a conventional modulator/demodulator. Defendants cite to portions of the specification where the modem “communicates via a telephone line with the network component (either a local base station repeater cell or a network hub switching center).” *Id.* at 8 (citing ‘491 Patent at 4:10-22; 5:30-41). Moreover, Defendants argue that the modem 22 of the ‘491 patent communicates with digital subscriber units 12 by “transmit[ing] a digital message superimposed by modulation on the 218-219MHz band carrier.” *Id.* at 8 n.1.

Plaintiff argues that while the modem may be capable of modulation/demodulation, the patentee describes a modem that communicates over other mediums that do not require modulation/demodulation such as the Internet. PLAINTIFF’S OPENING CLAIM CONSTRUCTION BRIEF (Doc. No. 528) (“PLTFF’S BRIEF”) at 11. Moreover, Plaintiff asserts that the specification discloses modems that “receive, process, and transfer data between the external and local communication link,” functions that Defendants’ proposal excludes. *See id.* (citing ‘491 Patent 4:5-7(modem “relays that message . . . back to local base station repeater cell”); *id.* at 5:25-30 (modem “relays that message . . . back to the network hub switching center”); *id.* at 8:44-49 (modem is “for transferring . . . .”)). For Plaintiff, this understanding of modem draws support from Barron’s Dictionary of Computer Terms (1992) which defines modem as “[a] device that encodes data from transmission over a particular medium, such as telephone lines, coaxial cables, fiber optics, or microwaves.” EON’S CLAIM CONSTRUCTION REPLY BRIEF (Doc. No. 564)(“REPLY”) at 3 (quoting BARRON’S DICTION OF COMPUTER TERMS, 1992 (Ex. S to REPLY (Doc. No. 564-2))).

As will be explained in more detail below, the Court finds (1) that a person having ordinary



skill in the art would view “modem,” as disclosed in the ‘491 patent, to refer to the plain and ordinary meaning of “modem,” i.e. a device for converting between analog and digital signals; and (2) the patentee did not act as his own lexicographer to define “modem.” As a result, the Court construes “modem” as “a modulator and demodulator that converts digital information to analog information, and converts analog information to digital information.”

First, the ordinary meaning of modem includes modulation/demodulation. The Court is tasked with determining the ordinary and customary meaning of a claim term to a person having ordinary skill in the art at the time of the invention. *See Phillips*, 415 F.3d at 1312-13. “The customary meaning of a claim term is not determined in a vacuum and should be harmonized, to the extent possible, with the intrinsic record, as understood within the technological field of the invention.” *Lexicon Medical, LLC v. Northgate Tech., Inc.*, 641 F.3d 1352, 1356 (Fed. Cir. 2011)(citing *Phillips*, 415 F.3d at 1312). However, when the specification “reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise posses[.] . . . the patentee’s lexicography governs.” *Phillips*, 415 F.3d at 1316. A claim term may be defined in a particular manner for the purposes of a patent even without explicit redefinition, provided that this redefinition is done with “reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994); *Bell Atl. Networks Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001). However, the Federal Circuit “indulge[s] a ‘heavy presumption’ that claim terms carry their full ordinary and customary meaning, unless the patentee unequivocally imparted a novel meaning to those terms or expressly relinquished claim scope during prosecution.” *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003)(citations omitted); *Epistar Corp. v. Int’l Trade Com’n*, 566 F. 1321, 1335 (Fed. Cir.

2009).

The Court finds that a person having ordinary skill in the art at the time of the invention would understand that “modem” is at least capable of, if not required to, modulate/demodulate data transmission. Newton’s Telecom Dictionary definition of “modem” provides a concise explanation of what is meant by modulation/demodulation:

Acronym for MOdulator/DEModulator. Equipment which converts digital signals to analog signals and vice-versa. Modems are used to send data signals (digital) over the telephone network, which usually is analog. The Modem modulates the “1’s” and “0’s” into tones which can be carried by the phone network. At the other end, the demodulator part of the modem converts the tones back into digital 1’s and 0’s.

EX. 1 TO RESPONSE, NEWTON’S TELECOM DICTIONARY (8th ed., 1992)(“NEWTON’S”), (Doc. No. 562-1) at 659-60.<sup>3</sup> For example, a conventional “dial-up modem” uses a modulator to convert “binary digital information to audio tone signals suitable for transmission” over a telephone line. *See* EX. 2 TO RESPONSE, MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS (5th ed. 1994), (Doc. No. 562-2) at 1283. Thus, a modulator/demodulator converts digital data into an analog signal for transmission.

Plaintiff urges that Barron’s Dictionary of Computer Terms (1992) defines modem as a “device that encodes data for transmission over a particular medium, such as telephone lines, coaxial cables, fiber optics, or microwaves.” REPLY at 3 (quoting EX. S TO REPLY, BARRON’S DICTIONARY OF COMPUTER TERMS (3rd ed. 1992), (Doc. No. 564-2)(“BARRON’S”), at 212). However, Eon selectively quotes from the source. When read in context, the Barron’s definition clearly reflects an understanding that a “modem” is a modulator/demodulator: “**MODEM**: A modem (short for

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<sup>3</sup>Eon has informed the Court that the word “modem” is not, in fact, an acronym as claimed by Defendants. REPLY at 10 n. 34. Rather, “it is a ‘portmanteau’ formed by combining the sounds and meanings of two distinct, yet related words, modulate and demodulate.” *Id.* Another popular example of a portmanteau is “smog” formed from “smoke” and “fog.”

modulator-demodulator) is a device that encodes data for transmission over a particular medium, such as telephone lines, coaxial cables, or microwaves. The modems commonly used with computer terminals and microcomputers transmit RS-232 serial data over telephone lines. . . .” BARRON’S at 212. Thus, while the physical connection may be “telephone lines, coaxial cables, fiber optics or microwaves,” the fact remains that a modem modulates digital data to analog data for transmission over any number of media, including telephone lines, coaxial cables, fiber optics, or microwaves, and demodulates analog data at the receiving end to digital data. Indeed, it appears that Plaintiff does not dispute that a modem is at least *capable of* modulating/demodulating. *See* PLTFF’S BRIEF at 11-12 (“A person of ordinary skill would understand modem in the context of the entire ‘491 patent as capable of modulation/demodulation...”).

The ‘491 patent’s use of the term “modem” reflects an understanding that “modem” is a modulation/demodulation device. For example, in describing an embodiment represented by Figure 2, the specification identifies link 24 as a “telephone line” and references an “auto dial-up” feature that suggests a modulator/demodulator:

With reference still to FIG. 2, in the present embodiment, when communicating over Path B, modem 22 is connected to local base station repeater cell 10 through telephone line 24 using, for example, either an 800 or 900 telephone number. Next, TV listings, for example are downloaded into modem 22 and into subscriber unit 12. The telephone link between subscriber unit 22 and local base station repeater cell 10 via modem 22 is broken after approximately 30 seconds allowing for normal use of the telephone line. Use of the link between subscriber unit 22 and local base station repeater cell 10 via modem 22 is protected by a serial number handshake. Initiation of auto dial-up on a daily or more frequent schedule by subscriber unit 12 insures that the data received by subscriber unit 12 remains current.

‘491 Patent at 4:9-22. *See also* ‘491 at Abstract (“The local base station repeater cell is connected *via a telephone line* to the modem . . . . The modem then transmits the responses over the *telephone line* to the local base station repeater cell”)(emphasis added).

As Plaintiff notes, the '491 disclosure does not limit the modem's communications to those transmitted over telephone lines. For example, the specification states that "[a]lthough a telephone line is used in the present embodiment, the present invention is also well suited to having local base station repeater cell 10 and modem 22 connected by, for example cable or other means." 3:57-61 (with reference to Fig. 2); *see also id.* at 5:11-14 (with reference to Fig. 3) ("Although a telephone line is used in the present embodiment, the present invention is also well suited to having local network hub switching center 30 and modem 22 connected by, for example, cable or other means"). While the physical connection may be a telephone line, cable, or other means, nothing suggests that the communications used over line 24 are anything but analog communications sent by and through a modem. *See BARRON'S* at 212.

Second, the Court finds no indication that the patentee chose to redefine "modem" from its conventional meaning, much less any such redefinition set out "with reasonable clarity, deliberateness, and precision." *See Paulsen*, 30 F.2d at 1480. Plaintiff asserts that the patentee "defined a modem in the patent as a two-way device located proximate a subscriber unit that receives, processes, and transfers data between external and local communications links." PLTFF'S BRIEF at 11. Plaintiff cites to areas throughout the specification that purportedly identify the modem's required functions; however, none of these citations amount to a clear, deliberate, precise redefinition of "modem" by the patentee. The strong presumption that a term maintains its customary and ordinary meaning is highlighted by the fact that the preferred embodiment clearly includes an analog "telephone line" connected to the modem. *See '491 Patent* at Abstract ("The modem then transmits the responses over the telephone line to the local base station repeater cell"); *id.* at 2:27-28 ("the local base station repeater cell is connected via telephone line to the modem");

*id.* at 4:10-12 (“with reference still to Fig. 2, in the present embodiment with communicating over Path B, modem 22 is connected to the local base station repeater cell 10 through telephone line 24”); *id.* at 5:12-13 (“Although a telephone line is used in the present embodiment . . .”). Moreover, interpreting “modem” as a demodulator/modulator is further supported by ‘491 patent’s stated objective of “enabling communications between a subscriber unit and a base station repeater cell in areas where such communication has previously been impaired . . . [without] significantly increas[ing] the cost of communication within the two interactive broadcast data service network.” ‘491 Patent at 1:44-52. In other words, the disclosed modem must demodulate/modulate signals over existing telephone lines so that the network provider can avoid erecting additional base station repeater cells. Lastly, Plaintiff admits that the “modem” is at least capable of modulation/demodulation. *See* PLTFF’S BRIEF at 11-12 (“A person of ordinary skill would understand modem in the context of the entire ‘491 patent as capable of modulation/demodulation but Defendants’ proposal oversimplifies and falls short of providing a meaningful explanation of the claimed modem”). Thus, nothing in the patent’s disclosure amounts to a clear, deliberate, or precise redefinition of “modem.”

Plaintiff argues that interpreting “modem” as a modulator/demodualtor runs afoul of the doctrine of claim differentiation because dependent claims specify line 24 as a “telephone line.” *See* PLAINTIFF’S MARKMAN PRESENTATION SLIDES (Doc. 590-1) (“PLTFF’S SLIDES”) at 20; *compare, e.g.*, ‘491 Patent at 7:3-5 (Claim 4)(“The base sation configuration of claim 1 wherein said modem and said local base station repeater cell are communicatively coupled via a telephone line) *with* ‘491 Patent 6:56-58 (Claim 1)(.... a modem communicatively coupled to said local subscriber unit and said local base station repeater cell for transferring ....). Thus, for Plaintiff, the connection between

the modem and the local base station repeater cell is broader than “telephone” line and therefore the modem need not be a modulator/demodulator. *See* PLTFF’S SLIDES at 20; *see also* PLTFF’S BRIEF at 11. The Court agrees that the connection between the modem and the local base station repeater cell is and must be broader than simply a “telephone line.” Indeed, as explained above, the connection between the modem and the local base station repeater cell can be in the form of a “cable” or “other means.” Nevertheless, this does not change the fact that a person with ordinary skill in the art would understand that the modem can communicate over the telephone line, cable, or other means via a modulated/demodulated signal. *See supra* p. 11.<sup>4</sup>

Lastly, Defendants’ proposal simply expands the term “modem” into its original linguistic elements: **MODulate** and **DEModulate**, leaving the jury to decide what these terms mean. The Court’s construction, “a modulator and demodulator that converts digital information to analog information, and converts analog information to digital information,” captures the limitation advocated by Defendants while providing context to the jury. As explained above, including language explaining that a “modem” converts from analog to digital reflects a person of ordinary skill in the art’s understanding of the term in light of the ‘491 patent’s disclosure.

**b. “modem communicatively coupled”**

<b>Claim Term Requiring Construction</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
<u>modem communicatively coupled</u> to said local subscriber units and said local base station repeater	No construction of this term is necessary beyond EON's proposed construction of “modem” and “multiplexed”	“the modem is connected to the local subscriber units and the local base station repeater cell to relay the multiplexed

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<sup>4</sup> Additionally, Plaintiff’s construction “located proximate a subscriber unit . . . between external and local communication links” does little to define the term “modem.” The remainder of the claim language provides adequate context to explain the relationship of the modem to other elements of the network.

cell for transferring said multiplexed synchronously related digital data messages of various lengths (Claim 1)	and this Court's prior construction of "synchronously related" (related in time and/or frequency)	synchronously related digital data messages of variable lengths between them through modem communications with a compatible modem device at the base station repeater cell and the subscriber units"  [Defendants note that the term "synchronously related" was not proposed by EON for construction prior to the briefing and, as a result, Defendants did not address this term.]
<u>modem communicatively coupled</u> to said local subscriber units and said digital transmitter for transferring data (Claim 12)	No construction of this term is necessary beyond EON's proposed construction of "modem."	"the modem is connected to the local subscriber units and the digital transmitter to relay the data between them through modem communications with a compatible modem device at the digital transmitter and the subscriber units"
modem communicatively coupled to said at least one subscriber unit and said network hub switching center for transferring multiplexed synchronously related digital data messages of variable lengths (Claim 13)	No construction of this term is necessary beyond EON's proposed constructions of "modem" and "multiplexed" and this Court's prior construction of "synchronously related" (related in time or frequency).	Although the phrase "multiplexed synchronously related digital data messages of variable lengths" is indefinite when used in conjunction with the phrase "at least one subscriber unit," the remaining claim phrases can be understood as:  "the modem is connected to the at least one subscriber unit and the network hub switching center to relay the multiplexed synchronously related digital data messages of variable lengths between

		<p>them through modem communications with a compatible modem device at the network hub switching center and the at least one subscriber unit”</p> <p>[Defendants note that “synchronously related” was not proposed by EON for construction prior to the briefing and, as a result, Defendants did not address this term.]</p>
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The essential dispute between the parties is whether “communicatively coupled to” requires the modem to communicate with network components through modulated/demodulated signals. Having construed “modem” above as “a modulator and demodulator that converts digital information to analog information, and converts analog information to digital information,” the Court finds it unnecessary to construe the phrase “communicatively coupled.” As will be explained below, because the modem is communicatively coupled to a subscriber unit via digital communications and not through modulated/demodulated signals, the Court finds that the term “communicatively coupled to” does not require modem to modem communications as advocated by Defendants.

Defendants seek to add a limitation that the modem is “connected to” another “compatible modem device” such that the two devices can communicate via “modem communications.” *See* RESPONSE at 11. Defendants cleverly assert that “it takes two to tango” and thus, “[w]ithout a compatible modem at **both ends**, the devices cannot communicate, and the phrase would cover inoperative embodiments.” RESPONSE at 11. Defendants point to Fig. 6A of the ‘101 patent which



depicts a base station with “its own compatible modem at one end of a telephone line [] for communications with the modem of the remote receiver [] at the other end.” *Id.* at 12-13. Moreover, Defendants cite to extrinsic evidence that describes the function of a modem over a telephone line as having a modem on both ends of the line. *Id.* at 13.

Plaintiff argues that there is no support in the specification for requiring “communicatively coupled” to require such limitations. For Plaintiff, the patentee knew how to describe a pair of modems and did so in the context of the ‘101 patent, but chose not to in the ‘491 patent specification. REPLY at 5 (citing ‘101 Patent at Fig. 6A (depicting a “modem” on both the remote receiver and the base station)). Moreover, Plaintiff protests that the “connected to” limitation “improperly narrows and suggests a physical connection that will confuse in the context of wireless (*e.g.*, RF) communication links.” PLTFF’S BRIEF at 15 (citing ‘491 Patent at 2:31-33).

Construing “modem” as a “modulator demodulator that converts digital information to analog information, and converts analog information to digital information” provides the proper context to understand the claims. Where the modem is communicatively coupled to a network component over a digital line, it is not necessary to modulate the signal into analog components and therefore it is not necessary to demodulate the signal on the other end. In other words, if the modem is connected to a network component over a digital link, there need not be a modem attached to the network component in order for the network component to communicate with the modem.

Claims 1, 12, and 13 require that the modem is communicatively coupled to the local subscriber unit. Defendants’ proposed construction would require the subscriber unit to include a “modem” such that the subscriber unit can engage in “modem communications” with the modem 22. The specification, however, discloses a subscriber unit that communicates with the local base

station repeater cell via digital communications. Figure 2 reproduced above shows the modem 22 “communicatively coupled” to subscriber unit 12 through the wireless link 26. Defendants proposal would require modem communications to occur over wireless link 26. This suggests an analog signal that is not required by the specification or the claims.

The ‘491 patent describes 26 as an “rf link” that operates “at a frequency of approximately 218-219 MHz . . . .” ‘491 Patent at 3:62-4:2; *id.* at 5:15-18. For example, with reference again to Figure 2, “subscriber unit 12 sends a data message or response over rf link 26 to modem 22. Modem 22 then relays that message or response over link 24 back to local base station repeater cell.” *Id.* at 4:4-7. Nothing in the specification requires such a link be analog or be over “modem communications” as proposed by Defendants. To the contrary, the specification supports a conclusion that the subscriber unit communicates with the base station repeater cell via digital communications. Furthermore, the subscriber unit is described in the ‘491 patent and the ‘101 patent as a **digital device** that communicates over an rf link at a frequency of 218-219 MHz. *See* ‘101 Patent at Abstract (“Digital messages are transmitted from the local subscriber units to the base station . . . .”); *id.* (“Small size, inexpensive, low-power, portable, digital-subscriber units are introduced . . . .”). Additionally, Figure 1 of the ‘491 patent schematically shows this digital subscriber unit communicating with a local base station repeater cell over an rf link of 218-219 MHz. *See* ‘491 Patent at Fig. 1; 3:7-13. Moreover, the “rf link” 26 between the subscriber unit 12 and the modem 22 operates at the same frequency, 218-219MHz, as the digital communications disclosed in the ‘491 patent’s parent, the ‘101 patent. *See* ‘101 Patent at 6:61-63 (“Each of these switched-in user home units then transmits a digital message superimposed by modulation on the 218-219MHz band subcarrier”).

In other contexts, however, “communicatively coupled” may require a modem to modem connection. As explained above in the Court’s construction of “modem,” the “modem” communicates with the local base station repeater cell via modulated/demodulated signals over line 24. Thus, the base station must, in a technical sense, have a “modem” for demodulating the analog data from line 24 into digital data. *See* NEWTON’S at 659-60. Similarly with regards to Claim 13 and Figure 3, the modem is “communicatively coupled” to network hub switching center 30 through a link 32, which the specification describes as “hard wire link 32 and public switched network 33.”

*See* ‘491 Patent at 5:9-12. Similar to the specification’s description of the hardwire link 24 connecting the modem to the local base station repeater cell, the specification further describes the connection between the network hub switching center and the modem as a telephone line, cable, or other means. *Id.* at 5:12-15 (“Although a telephone line is used in the present embodiment, the present invention is also well suited to having local network hub switching center 30 and modem 22 connected by, for example cable or, other means”). Thus, both the network hub switching center and the local base station repeater cell must have a modem device to communicate with modem 22 over lines 24 and 32.

Because the modem may be “communicatively coupled” to a network device such as a subscriber unit by a digital connection, the Court declines to construe “communicateively coupled” as requiring a modem to modem communications over analog lines. Having resolved the dispute between the parties, the Court finds that the terms do not require construction because their meanings are clear from the context of the claims and will be readily understood by the jury. *O2 Micro Int’l ltd., v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). Although the Court does not construe these terms, the parties may not interpret them in a manner inconsistent

with this opinion.

**c. “adapted for communicating”<sup>5</sup>**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“capable of communicating”	the phrase “said modem also adapted for communicating with said local base station repeater cells” should be construed as “the modem is also configured for modem communications with a compatible modem device at the local base station repeater cell”

The phrase “adapted for communicating” occurs in the larger phrase “said modem also adapted for communicating with said local base station repeater cells if communication therebetween [sic] is not otherwise prevented.” ‘491 Patent at 8:51-55 (Claim 13). Plaintiff argues that the plain and ordinary meaning of “adapted for communicating” is “capable of communicating.” Moreover, the specification “describes a modem ‘adapted to communicate’ that is ‘able to transmit data though line 34 to a local base station repeater cell’ when the base station is located ‘proximate to subscriber unit.’” PLTFF’S BRIEF at 12-13 (quoting ‘491 Patent at 5:43-47).

Defendants, on the other hand, argue that the “‘adapted for’ limitation reflects a required configuration, not just a ‘capability’ as Plaintiff insists.” RESPONSE at 15. Specifically, Defendants argue that because the claim calls for “at least one subscriber unit” to be “disposed within a predetermined base station geographic area” there must be a base station repeater cell present and the modem must be communicating with the base station repeater cell. *Id.* (citing ‘491 Patent at 8:36-41). Thus, the modem must be **configured** to communicate, not merely have the capability to do so. Moreover, Defendants assert that inclusion of “modem communications with a compatible

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<sup>5</sup>The term “adapted for communicating” is found in Claim 13.

modem device at the local base station repeater cell” is consistent with the how a person having ordinary skill in the art would view the disclosure.

For the reasons discussed above, the Court declines to include language explicitly defining the local base station repeater cell as including a modem. Moreover, the Court agrees with Plaintiff that the specification does not *require* the modem to be configured to communicate with the base station receiver. The claim language is clear: the modem is “capable of communicating” with the base station “if the communication therebetween [sic] is not otherwise prevented.” *See* ‘491 Patent at 8:51-55 (“said modem also adapted for communicating with said local base station repeater cell if communication therebetween is not otherwise prevented”). Moreover, this interpretation is supported by the specification’s description of Figure 3: “That is, the modem 22 is also *able to* transmit through line 34 to a local base station repeater cell when a local base station repeater cell becomes available.” *Id.* at 5:44-46. Thus, the modem need only have the capability to communicate with the local base station receiver. The Court therefore construes “adapted for communicating” as “capable of communicating.”

**d. “receiving a signal” / “not receiving a signal”**

Claim Term Requiring Construction	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
if said subscriber unit is not receiving a signal from said local base station repeater cell (Claim 5 & Claim 7)	“not receiving a signal” means “not receiving intended communications”	“the subscriber unit will not communicate with the modem unless the subscriber unit cannot directly receive a signal from the local base station repeater cell”
determining whether a subscriber unit located with a base station geographic area associated [with a] said local	“receiving a signal” means “receiving intended communications”	The parties have not offered constructions of the “determining” step. Defendants submit that the

base station repeater cell is receiving a signal from said local base station repeater cell (Claim 5 & Claim 7)		terms “receiving a signal” and “not receiving a signal” should be construed as part of the larger phrases for necessary context.
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The essential dispute between the parties is whether the claims “require that the subscriber unit(s) do not communicate with the network through the modem unless the subscriber unit is unable to communicate with the local base station repeater cell or the digital transmitter (depending on the specific claim).” RESPONSE at 17. Defendants argue that the claim language clearly excludes communication proceeding through the modem unless the subscriber units are unable to directly communicate with the local base station repeater cell. RESPONSE at 18. Plaintiff argues that Defendants’ proposals “rewrite the claims to require communication with the modem ‘if and only if’ said subscriber unit is not receiving a signal.” PLTFF’S BRIEF at 17. Plaintiff further argues that the specification and the claims allow for a middle ground where communications may proceed along one path or the other based on other non disclosed conditions.

Claim 5 clearly sets up two scenarios, one in which the subscriber is receiving a signal from the base station and one in which the subscriber is not receiving a signal from the base station. ‘491 Patent at 7:13-14 (Claim 5) (“if said subscriber unit *is receiving* a signal from said local base station repeater cell . . .”); *id.* at 7:28-29 (“if said subscriber unit *is not receiving* a signal from said local base station repeater cell . . .”). According to the claim language, when the subscriber unit is receiving a signal from the base station, outgoing data from the base station is sent directly to the subscriber unit. *Id.* at 7:15-19. Outgoing data from the subscriber unit, in turn, is sent both to the receive only receiver and the base station. *Id.* at 7:20-27. Similarly, when the subscriber unit is not receiving a signals from the base station, outgoing data from the base station is sent via the

“modem” to the subscriber unit, and data from the subscriber unit is sent to the base station via the “modem.” *Id.* at 7:28-43. This binary situation is presented as the solution to a problem in the art where, “under certain conditions, individual subscriber unit is are unable to receive transmissions from the local base station repeater cell.” *Id.* at 1:42-44. For example, the subscriber unit may be outside of the local base station repeater cell’s range or the subscriber unit may be “located within range of a local base station repeater cell, but may be positioned, for example, in a basement or other physical location which prevents the subscriber unit from receiving transmission from the local base station repeater cell.” *Id.* at 1:48-53; *see also id.* at 2:23-28 (“The above object has been achieved using a modem which is used to enable communications between a subscriber unit and a local base station repeater cell”).

This either/or relationship is further supported by the embodiments discussed in the specification, which depicts a switching means 13 with three positions, “Path A,” “Path B”, and a center position between Path A and Path B. ‘491 Patent at Fig. 2. While Figure 2 depicts a middle position, the specification is devoid of any description of a middle position or of the possibility of selecting multiple paths. In contrast, the specification clearly describes electronic switch 13 as selecting either Path A or Path B:

[I]f the subscriber unit 12 is able to detect rf signals from base station repeater cell 10 switching means 13 assumes a ***default position*** “Path A”. When switching means 13 of subscriber unit 12 selects Path A, subscriber unit 12 receives rf signals directly from local base station repeater cell 10 over rf link 14, and transmits data over an rf link 18 to remote receiver 16 which then transfers the data to local base station repeater cell 10 over hard link 20.

With reference again to FIG. 2, when subscriber unit 12 is unable to receive rf signals directly from local base station repeater cell 10, switching means 13 selects “Path B”. Thus, if subscriber unit 12 is unable to receive rf signals from local base station repeater cell 10, communication between subscriber unit 12 and local base station repeater cell 10 occurs along Path B using modem 22. When switching means

13 of subscriber unit 12 selects Path B, local base station repeater cell 10 transmits messages to modem 22 via, for example, telephone line 24 and public switched network 25. \* \* \* That is, subscriber unit 12 sends a data message or response over rf link 26 to modem 22. Modem 22 then relays that message or response over link 24 back to local base station repeater cell 10. Thus, two-way communication between local base station repeater cell 10 and subscriber unit 12 is achieved.

‘491 Patent at 3:40 - 4:9 (emphasis added). Thus, the default position of the switching means 13 is Path A, when the subscriber unit is receiving a signal from the local base station repeater cell. Moreover, the specification goes on to explain that “as soon as subscriber unit 12 is able to receive rf signals from local sation base station repeater cell 10 . . . conventional two-way communication is resumed.” *Id.* at 4:43-50. That is, as soon as the subscriber unit is able to receive rf signals from the local base station repeater cell, “the switching means of the subscriber unit selects Path A, and subscriber unit 12 would respond or transmit data messages back to local base station repeater cell 10 via remote receiver 16 thereby eliminating the need for modem 22.” *Id.* at 4:53-56.

Plaintiff argues that the ‘491 patent describes an embodiment where “a base station is ‘proximate to subscriber unit’ where direct communication to the subscriber unit is possible, yet the modem is still used to communicate with the subscriber unit.” PLTFF’S BRIEF at 18 (citing ‘491 Patent at 5:42-51). The passage cited by Plaintiff, however, makes no reference to the subscriber unit’s ability to receive a signal from the “proximate” base station. In contrast, the cited passage describes an embodiment described in Figure 3 where the switching means 13 selects Path B because a local base station repeater cell is unavailable. *Id.* at 5:45-47; *see also id.* at 4:67- 5:8 (“As shown in the embodiment of FIG. 3, in instances where no local base station repeater cell is located proximate to subscriber unit 12, two-way interactive communication is still possible. Because there is no local base station repeater cell, subscriber unit 12 is unable to receive rf signals from a local base station repeater cell. Thus, switching means 13 selects Path B, such that communication to and



from subscriber unit 12 occurs through modem 22”). The specification goes on to explain that when a base station becomes available, *the modem* is able to transmit through line 34 to a local base station repeater cell, in addition to or instead of the network hub switching center. *Id.* at 5:44-50. There is no indication from the specification that the addition of the proximate base station repeater cell alters the subscriber unit’s ability to receive a signal from the base station.

Eon argues that Defendants’ proposal seeks to replace “if” with “if and only if.” Plaintiff cites to Supreme Court statutory interpretation precedent distinguishing between “if” and “only if,” noting that “[t]he phrase ‘only if’ describes a necessary condition, not a sufficient condition.” PLTFF’S BRIEF at 18 (quoting *Cal. v. Hodari D.*, 499 U.S. 621, 628 (1991); citing *Township of Tinicum v. USA Dep’t of Transp.*, 582 F.3d 482, 489 (3rd Cir. 2009)(describing ‘if’ as a sufficient condition and ‘only if’ as a necessary condition)). The Court is not persuaded that statutory interpretation jurisprudence should be applied stripped of its context to patent claim interpretation. Although both statutory interpretation and claim construction are, at a basic level, exercises in analyzing carefully constructed and often obscure language, they require fundamentally different approaches and follow different rules and cannons. The most relevant difference here is that in claim interpretation, the Court has the benefit of looking to a developed intrinsic record including the patent specification and file history. As explained above, the claim language itself and the specification plainly limit the circumstances in which communications will proceed through a modem, i.e., if the local subscriber units are unable to directly communicate with the local base station repeater cell.

For the reasons discussed above, the Court finds that Claims 5 and 17 speak for themselves. The claimed method determines whether a subscriber unit located within a base station geographic

area associated with said local base station repeater cell (1) is, or (2) is not receiving a signal from the local base station repeater cell. The method steps listed after “if said subscriber unit is not receiving a signal from said local base station repeater cell, performing the steps of” are not performed if the “determining” step determines that the subscriber unit is receiving a digital signal representative of incoming data from the local base station repeater cell.

**e. “unable to communicate directly”**

<b>Claim Term Requiring Construction</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
if said local subscriber units are unable to directly communicate with said local base station repeater cell (Claim 1)	No construction of this term is necessary beyond Plaintiff’s proposed construction of “unable to [directly] communicate.”	“the subscriber units will not communicate with the modem unless the subscriber units cannot directly communicate with the local base station repeater cell”
if said subscriber units are unable to communicate directly with said digital transmitter (Claim 12)	No construction of this term is necessary beyond Plaintiff’s proposed construction of “unable to [directly] communicate.”	“the subscriber units will not communicate with the modem unless the subscriber units cannot communicate directly with the digital transmitter”
if said at least one subscriber unit is unable to communicate directly with a local base station repeater cell (Claim 13)	No construction of this term is necessary beyond Plaintiff’s proposed construction of “unable to [directly] communicate.”	“the subscriber unit will not communicate with the modem unless the subscriber unit cannot communicate directly with a local base station repeater cell”

The essential dispute between the parties is the same as above in conjunction with “is receiving” and is “not receiving.” For the reasons set forth above, the Court finds that the claim language speaks for itself and the ‘491 patent discloses a binary system where the subscriber unit either communicates over Path A or Path B. For example, Claim 1 reads:

a modem communicatively coupled to said local subscriber units and said local base station repeater cell for transferring said multiplexed synchronously related digital data messages of variable lengths between said set of local subscriber units and said local base station repeater cell if said local subscriber units are unable to communicate with said local base station repeater cell.

‘491 Patent at 1:57-64. The claim language, on its face, sets a condition on the recited function of the modem. In the example above, “for transferring and said multiplexed synchronously related digital data messages of variable lengths between said set of local subscriber units and said local base station repeater cell if said local subscriber units are unable to directly communicate with said local base station repeater cell” means that the “transferring function” is conditioned on whether “said local subscriber units are unable to directly communicate with said local base station repeater cell.”<sup>6</sup> Having resolved the dispute between the parties, the Court finds no further need to construe the phrases. *See O2 Micro Int’l Ltd.*, 521 F.3d at 1361.

**f. cell subdivision site/zone**

<b>Claim Term Requiring Construction</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
cell subdivided sites partitioned from said local base station geographic area (Claim 1)	No construction necessary	“the local base station geographic area is divided into a plurality of smaller cell areas, each area defined by the reception range of an associated local remote receiver”
cell site divided into a plurality of subdivided zones	No construction necessary	“the cell site is divided into a plurality of smaller cell areas,

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<sup>6</sup> Similarly, in Claim 12, the phrase “for transferring data between said subscriber units and said digital transmitter” is conditioned on whether “if said subscriber units are unable to communicate directly with said digital transmitter.” *See* ‘491 Patent at 8:31-35 (Claim 12). Moreover, in Claim 13, the phrase “for transferring multiplexed synchronously related digital data messages of variable lengths between said at least one subscriber unit and said network hub switching center” is conditioned on whether “if said at least one subscriber unit is unable to communicate directly with a local base station repeater cell.” *Id.* at 8:44-54.

(Claim 12)		each area defined by the reception range of an associated receive only digital receiver”
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The parties dispute whether to include language describing the subdivided zones or sites as “defined by the reception range of an associated local remote receiver [or receive only digital receiver.]” Defendants’ proposed construction would limit “cell subdivision cites” to areas “defined by the reception range of an associated local remote receiver.” Defendants find support from the ‘101 patent’s preferred embodiment which depicts subdivisions defined by the reception range of receivers. *See* RESPONSE at 24 (citations to ‘101 Patent omitted). The Court agrees that the preferred embodiment in the ‘101 patent describes such an arrangement. However, nothing in the specification or the claims requires a construction of subdivision/zones that includes such a limitation.

Defendants primarily rely on Fig. 2 of the ‘101 patent which plainly shows subdivisions (e.g., 22A, 22B, 22x) defined by the reception range of various remote receivers (e.g., 20A, 20B, 20x). *See* RESPONSE at 24. The danger of importing limitations into the claims based on figure depictions is highlighted by Defendants’ failure to cite to other areas of the specification that necessitate such a construction. Moreover, the teachings of the ‘101 patent and the ‘491 patent do not preclude the possibility of subdivisions or partitions with overlapping coverages.

Because neither the specification nor the claims require a construction of “subdivided...” that defines the area by the reception of the remote receiver and a lay jury is capable of understanding terms such as “partitioned” and “subdivided,” the Court finds no construction necessary. *See O2 Micro Int’l Ltd.*, 521 F.3d at 1361.

**g. “multiplexed”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“combined messages transmitted over a single channel or line”	“combined messages transmitted over a single radio-frequency channel”

The Court previously construed “multiplex” in *Eon Corp. IP Holdings, LLC v. Sensus USA*. In construing “multiplex” as “combined messages transmitted over a single radio-frequency channel,” the Court noted that multiplexing is “[a] technique used in communications ... for transmitting a number of separate signals simultaneously over signal channel or line.” 741 F. Supp. 2d. at 809 (quoting COMPUTER DICTIONARY 235 (1991) (alterations in original)).

Eon argues that the Court should modify its previous construction because the ‘491 patent does not require multiplexed messages to be sent wireless or over a radio-frequency channel. PLTFF’S BRIEF at 23. Eon asserts that the doctrine of claim differentiation requires a construction of “multiplex” that permits messages to be sent over telephone, cable, or other non-radio-frequency means. *Id.* at 23-24 (citing ‘491 Patent at 8:62-64 (Claim 16) (“The base station configuration of claim 13 wherein: said modem and said network switching center are communicatively coupled via a telephone line”); *id.* at 5:8-14 (“Although a telephone line is used in the present embodiment, the present invention is also well suited to having local network hub switching center and modem connected by, for example, cable, or other means”))).

Defendants argue that the Court should adopt its previous construction without modification, noting that “(a) the ‘491 specification does not mention this term at all; and (b) the ‘101 specification contains nearly identical references to telephone lines or cables.” RESPONSE at 27 (citing ‘101 Patent at 5:2-5, 54-5-9). Moreover, Defendants assert that Plaintiff’s claim differentiation arguments are “technically incorrect,” because “telephone line” and “rf link” as used

in the dependent claims of the '491 patent do not modify the term "multiplex" but rather, modify "communicatively coupled." *Id.* at 28. Lastly, Defendants argue that "technically, a 'line' or 'link' may contain more than one channel, which renders Plaintiff's proposed construction meaningless." *Id.*

Courts presume that a claim term carries the same meaning throughout a particular patent and related patents. *Fractus S.A. v. Samsung Electronics Co.*, No. 6:09-cv-203, 2010 WL 5287531, at \*25 (citing *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003)). However, this presumption can be overcome by evidence that the patentee assigned a different meaning to a term that appears in two related patents. *Id.* (citing *Fin Control Sys. Pty, Ltd. v. OAM Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001)). In this case, this Court recognized in *Sensus* that the plain and ordinary meaning of "multiplexed" was not limited to messages sent over radio frequency. As explained above, in construing "multiplexed" in *Sensus*, the Court noted that multiplexing is "[a] technique used in communications ... for transmitting a number of separate signals simultaneously over signal channel or line." *Sensus*, at 741 F. Supp. 2d at 809 (quoting COMPUTER DICTIONARY 235 (1991) (alterations in original)).

Although the Court in *Sensus* found reason to limit "multiplex" to radio frequencies, the Court sees no need to do so in this case because the disclosure for the '491 patent does not require such a limitation. Claim 13 requires a modem communicatively coupled to a subscriber unit and a network hub switching center that "is for transferring multiplexed . . . digital data messages . . . between said at least one subscriber unit and said network hub switching center." '491 Patent at 8:44-48 (Claim 13). Thus, the modem must be able to send multiplexed digital messages to both the network hub switching center and a subscriber unit. *Id.* Figure 3 depicts the modem

connected to the network hub switching center via “hard wire link” 32 and to the subscriber unit 12 by rf link 26. ‘491 Patent at Fig. 3; 5:9-12. Moreover, the specification describes the “hard wire link” 32 as a telephone line, cable or other means. *Id.* at 5:11-14. Therefore, the multiplexed digital messages must be able to be transferred from the network hub switching center across a hardwire link and an rf link. As a result, the Court finds that the disclosure of the ‘491 patent clearly contemplates a “multiplexed” message that is not limited to rf signals.

Finding that the ‘491 specification does not support a limitation that “multiplex” signals occur only over radio-frequency, the Court returns to the plain and ordinary meaning of the term as described in the text of the *Sensus* opinion. That is, “multiplexed” means “combined messages transmitted over a single channel.” The Court declines to include “or line” in the definition of “multiplex” because, as Defendants point out, a line may have may multiple channels.

**h. “receive only receiver unit”**

<b>Claim Term Requiring Construction</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
receive only receiver unit (Claim 5)	No construction necessary beyond the Court’s prior construction:  “receive only digital receiver” (a receiver for receiving and relaying digital communications).	“a device that relays data signals from a subscriber unit to the local base station repeater cell but that does not relay data signals from the local base station repeater cell to the subscriber unit”
receive only digital receiver (Claim 12)	No construction of this term is necessary beyond the Court’s prior construction of the term “receive only digital receiver” (a receiver for receiving and relaying digital communications).	“a device that relays digital communications from a local subscriber unit to a local base station repeater cell but that does not relay digital communications from the local base station repeater cell to the local subscriber

		unit”
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Neither party disputes whether the Court’s construction of “receive only receiver unit” in the *Sensus* case is incorrect or should be adopted in this case. The dispute centers how much of the language of the *Sensus* opinion should be incorporated into the construction of “receive only receiver unit” in this case. Eon argues that Defendants’ construction improperly “seeks to narrow the claims by prohibiting receiver-only receivers from transmitting any ‘digital communications’ or ‘data signals.’” PLTFF’S BRIEF at 24-25. Defendants argue that its construction simply “provides an explicit recitation of what this Court already held in the *Sensus* case.” RESPONSE at 26.

Defendants’ construction adds undefined phrases into the claim term that have the potential to limit the construction of “receive only” beyond the Court’s prior construction without justification. As Eon points out, “data signals” and “digital communications” may include control signals which would substantially narrow the Court’s prior construction. REPLY at 9. The Court construes “receive only unit” in Claim 5 as “a receiver for receiving transmissions” and “receive only digital receiver” in Claim 12 as “a receiver for relaying digital communications.” “Receive only” refers to the communication of messages to and from the base station cells and the subscriber units. That is, the subscriber unit can only receive digital messages directly from the base station cell and not from the receiver units. The receiver unit’s role with respect to those messages is simply to receive them from the low powered subscriber units and to pass them along to the base station cell. This does not however, forbid routine handshaking, error checking, and other control signals from being communicated between the receiver units and the subscriber units. *See Sensus*, 741 F. Supp. 2d 783, 806-807.



i. “network hub switching center”<sup>7</sup>

Plaintiff’s Proposed Construction	Alcatel-Lucent’s Proposed Construction	Remaining Defendants’ Proposed Construction
No construction necessary	“a centralized switching center that performs all of the switching functions needed for operation of the subscriber units in the group of cells that it services	No construction necessary

Plaintiff asserts that, consistent with the Court’s prior decision that “network hub switching center means” and “hub switching means” in the ‘101 patent required no construction, no construction is necessary here. PLTFF’S BRIEF at 25-26. Only Alcatel-Lucent proposes construing the term “network hub switching center.”<sup>8</sup> See DEFENDANT ALCATEL-LUCENT USA INC.’S RESPONSE CLAIM CONSTRUCTION BRIEF (Doc. No. 562), “ALU RESPONSE.”

Alcatel-Lucent asserts that Eon “urged the Court to rely on definitions that Alcatel-Lucent agrees with and [the Court] has adopted in its construction of the term. Eon’s assertion now that no construction of the term is necessary will open the door later to arguments that are wholly inconsistent with the Court’s prior Markman order.” ALU RESPONSE at 4. In essence, Alcatel-Lucent urges the Court to hold Eon to a definition Eon cited in its *Sensus* briefing for the proposition that a network hub switching center is a “well known structural element.” *Id*; see also Ex. A to ALU RESPONSE, Eon *Sensus* Opening Claim Construction Brief (Doc. No. 562-1) at 12-13.

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<sup>7</sup> The term “network hub switching center” is found in Claims 1, 13, and 17. Alcatel-Lucent’s originally proposed “a centralized switching center linked to a base station that performs all of the switching functions needed for operation of the subscriber units in the group of cells that it services.” However, at the *Markman* hearing, Alcatel-Lucent represented it agreed to drop the phrase “linked to a base station” from its proposed construction. See MARKMAN TRANSCRIPT at 102:1-6.

<sup>8</sup>The remaining Defendants withdrew their proposal and agreed with Plaintiff that the term need not be construed. See RESPONSE at 30.

In *Sensus*, this Court concluded that “network hub switching center means” was not a means-plus-function claim and that its meaning was clear from the context of the claims. *Sensus*, 741 F. Supp. at 812-13. In rejecting the contention that “network hub switching means” should be interpreted as a means-plus-function claim, this Court found that “[n]etwork hub switching centers . . . were well-known networking components that one of ordinary skill in the art would have recognized were capable of performing the routing functions.” *Id.* at 812 (“the routing functions” referring to the identified function of “routing communications from and to subscriber units”). The Court then determined that the meaning of network hub switching center was clear from the context of the claims. *Id.*

The Court is not persuaded that Eon’s proposed “no construction necessary” is at odds with Eon’s previous claim construction arguments or with the Court’s construction in *Sensus*. Just as the Court did in *Sensus*, the Court finds that no construction is necessary because a jury can readily understand the meaning of “network hub switching center” from the context of the claim. Moreover, nothing in the specification or the prosecution history requires the additional limitations.

**j. “subscriber unit”**

<b>Claim Term Requiring Construction</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
transmitting a second outgoing data signal also representative of said outgoing data from said modem to said subscriber unit [local base station repeater cell]	No construction necessary beyond Eon’s proposed construction of “modem”	The term should be construed as originally issued, according to its plain and ordinary meaning, and not as purportedly modified by the Certificate of Correction (“CoC”)

Defendants argue that the United States Patent and Trademark Office (“Patent Office”)

improperly issued a Certificate of Correction (“CoC”) changing “local base station repeater cell” to “subscriber unit.” RESPONSE at 28. Defendants argue that the Patent Office incorrectly determined that the mistake was of a “clerical or typographical nature, or of minor character.” *Id.* (quoting 35 U.S.C. § 255). Defendants do not contest the actual construction of the phrase, only whether the CoC is valid. This is not a claim construction issue, but rather an issue for summary judgment requiring proof of two elements: “(1) the corrected claims are broader than the original claims; and (2) the presence of the clerical error, or how to correct that error, is not clearly evidenced to one of skill in the art.” *Central Admixture Pharmacy Services, Inc. v. Advanced Cardiac*, 482 F.3d 1347, 1353-56 (Fed. Cir. 2007). The first element is a question of law; however, the second element is a question of fact. *Id.* Moreover, since Defendants are asking the Court to “invalidate a certificate of correction which is part of fully issued patent, [Defendants] must meet the ‘clear and convincing standard of persuasion.’” *Id.* at 1353 (citing *Superior Fireplace Co. v. Majestic Products Co.*, 270 F.3d 1358, 1367 (Fed. Cir. 2001)). If Defendants wish the Court to rule on the issue, they should follow the proper letter brief procedure requesting to leave to file a motion for summary judgment pursuant to the Court’s Standing Order Regarding Summary Judgment Motions.<sup>9</sup> Thus, the Court declines to construe the phrase “transmitting a second outgoing data signal also representative of aid outgoing data from said modem to said subscriber unit.”<sup>10</sup>

**k. Remaining Terms.**

In its briefing, Plaintiff represented that the parties do not dispute the terms “synchronously

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<sup>9</sup>The Court’s Standing Order Regarding Summary Judgment Motions is available on the Court’s website at [http://www.txed.uscourts.gov/cgi-bin/view\\_document.cgi?document=19741](http://www.txed.uscourts.gov/cgi-bin/view_document.cgi?document=19741).

<sup>10</sup>That being said, the Court is skeptical of the proposition that “subscriber unit” is somehow broader than “local station base station repeater.”

related” and “remote receiver,” and the Court should adopt its previous construction for these terms.

*See* PLTFF’S BRIEF at 30. Defendants contend, however, that Plaintiff never informed Defendants of its desire to construe those terms and did not provide Defendants with these proposed constructions until service of the opening claim construction brief. RESPONSE at 5-6. Plaintiff, however, notes that Defendants identified these claim terms for construction in their Patent Rule 4-1 disclosure, and Plaintiff stated its position that the Court’s prior constructions should apply. *See* P.R. 4-3 JOINT CLAIM CONSTRUCTION HEARING STATEMENT (Doc. No. 492) at 6 (proposing that “local remote receiver being adapted to receive low power digital messages” need not be construed beyond the Court’s prior constructions); *id.* at 6-7 (proposing that the phrase “modem communicatively coupled to said local subscriber units and said local base station repeater cell for transferring said multiplexed synchronously related digital data messages of various lengths” need not be construed beyond “Eon’s proposed construction of ‘modem’ and ‘multiplexed and this Court’s prior constructions.’”)

The P.R. 4-3 Joint Claim Construction and Pre-Hearing statement reflects an understanding that Plaintiff intended to rely on the Court’s prior construction of the terms “synchronously related” and “remote receiver.” *See id.* Moreover, Plaintiff’s opening brief explicitly identifies Plaintiff’s intention to rely on the Court’s previous constructions. PLTFF’S BRIEF at 30. Furthermore, Plaintiff argued at the Claim Construction hearing that “We have said consistently every similar term that was construed in the previous case should have the same construction here, unless we raised that issue with the Court in our briefing, and we did that, for instance, for multiplexed.” MARKMAN TRANSCRIPT at 148:10-18.

Defendants do not present alternate constructions, but instead argue that because Plaintiff did

not explicitly identify the terms “synchronously related” and “remote receiver” and propose the Court’s prior construction, “Defendants need not address the Court’s prior constructions of ‘synchronously related’ and ‘remote receiver’ and reserve the right to challenge Plaintiff’s proposed construction, if necessary.” RESPONSE at 6. Defendants have not, however, challenged the proposed constructions. The Court finds that Defendants had notice of Plaintiff’s intention to rely on the Court’s previous constructions of the terms “synchronously related” and “remote receiver” but failed to contest these constructions. Defendants’ attempt to reserve the right to contest these constructions promotes inefficiency and gamesmanship. Thus, the Court finds that Defendants’ have waived their objections to the Court’s prior construction of “remote receiver” and “synchronously related.”<sup>11</sup>

### CONCLUSION

For the foregoing reasons, the Court adopts the constructions set forth above.

**So ORDERED and SIGNED this 8th day of February, 2012.**

  
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JOHN D. LOVE  
UNITED STATES MAGISTRATE JUDGE

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<sup>11</sup>The Court is not persuaded that Plaintiff properly noticed Defendants of its intention to rely on the Court’s previous construction of “base station broadcast signal.” Thus, if the parties desire, they may revisit claim construction as to this term at a later date.